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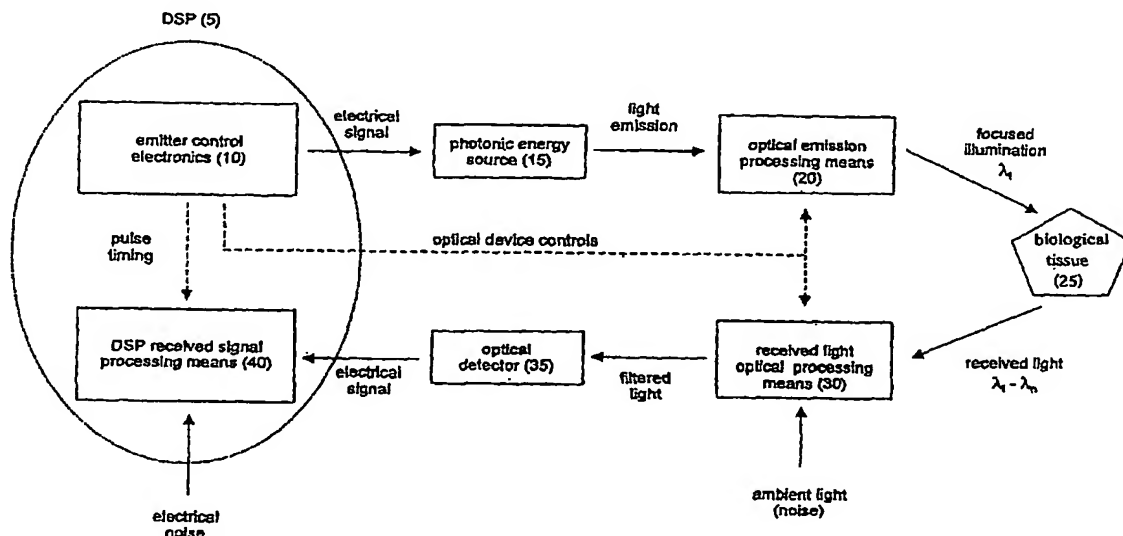
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(54) Title: OPTICAL SYSTEM AND USE THEREOF FOR DETECTING PATTERNS IN BIOLOGICAL TISSUE



(57) Abstract: The present invention provides an optical system comprises a scanning spectrometer incorporating an electronic light modulator and digital signal processing means. The spectrometer technique combined with optical signal encoding provides the ability to obtain spectral signatures and identify optical patterns of biological tissue. One example of biological tissue scanning includes techniques such as identification of optical patterns of normal and abnormal tissues in addition to the delineation of these spectral patterns between the abnormal and normal tissue. Due to an enhanced signal-to-noise ratio provided by the optical system according to the present invention, this optical system can detect patterns in biological tissue that may be more subtle than those patterns that would be possible to obtain with currently available optical systems.